Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 1/25/11, 9:00 a.m.

Objective: Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmonids and green sturgeon. DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: http://swr.nmfs.noaa.gov/ocap/actions.htm

DWR: Andy Chu, Cynthia LeDoux-Bloom, Angela Llaban, Francine Mejia, Mike Ford
FWS: Nick Hindman Roger Guinee
NMFS: Barbara Rocco, Bruce Oppenheim, Barb Byrne, Jeff Stuart, Garwin Yip
DFG: Dan Kratville; **Reclamation**: John Hannon, Thuy Washburn; **SWRCB**: Kari Kyler

Agenda

1) Fish monitoring
2) First trigger met 1/20; OMR reduction
3) Water project operations
4) Weather forecasts

Fish Monitoring

Knights Landing: There were 374 fish caught from 1/18 to 1/24/11; the catch peaked at 103 on 1/20 and was down to 30 on 1/24. Of the 347 fish, 323 were fall run, 19 were spring run, 5 were winter run, 10 were ad-clipped Chinook and 17 were ad-clipped steelhead. Average flows were 13,501 cfs; average water temperature was 51.5°F. Fall- and spring-run Chinook CPUE = 23.96; winter- and late-fall-run Chinook CPUE = 0.382.

Tisdale Weir: There were 549 fish caught from 1/16 through 1/24/11, of which 467 were fall run, 44 were spring run, 6 were winter run, 7 were ad-clipped Chinook, and 25 were ad-clipped steelhead. There were no late-fall run or non-clipped steelhead caught. There were 161 caught on 1/16 that were mostly fall and spring run; catch was down to 10 on 1/18 and back up to 52 on 1/20 and 81 on 1/24. Catch of ad-clipped fish peaked at 10 on 1/18; there was only 1 wild fish caught. Average flows were 13,080 cfs; average water temperature was 50°F. Average turbidity was 14.46 NTU, which peaked on 1/16/11 at 20.5 NTU. Fall- and spring-run Chinook CPUE = 34.3; winter- and late-fall-run Chinook CPUE = 0.357.

Moulton Weir: There were 390 fish caught from 1/16 through 1/24/11, of which 337 were fall run, 6 were spring run, 3 were winter run, 13 were ad-clipped Chinook, and 31 were ad-clipped steelhead. There were no late-fall run or wild steelhead caught. Total catch peaked on 1/16 with 138 fish, of which 132 were fall run. Average water flows were 12,007 cfs; average water temperature was 50.04°F. Turbidity averaged 14.33 NTU, which peaked on 1/18/11 with 18.35 NTU. Fall- and spring-run Chinook CPUE = 24.0; winter- and late-fall-run Chinook CPUE = 0.199.

Chipps trawl: There were 22 fish caught from 1/18 to 1/21/11, of which 9 were delta smelt (64–70 mm), 3 were splittail (115–129 mm), and 10 were steelhead (187–254 mm). Of the 10 steelhead, 8 were ad-clipped; 2 were wild. Average water temperature was 9°C.

Sacramento trawl: There were 42 fish caught from 1/18 to 1/21/11, of which 31 were fall run (34–45 mm), 7 were spring run (45–51 mm), 2 were ad-clipped Chinook, and 2 were ad-clipped steelhead. Average was temperature was 9.6°C.

Mossdale trawl: There were 2 fall run caught (34 and 36 mm) on 1/19/11; no other species of concern were caught. Average water temperature was 10.0°C.

Beach seine: There were 776 fish caught from 1/18 to 1/20/11, of which 696 were fall run (23–45 mm), 73 were spring run (45–57 mm), 6 were winter run (65–87 mm), and 1 was ad clipped (134 mm). Average water temperature was 9.7°C.

Salvage data from 1/17–1/23/11

CVP: 100 non-clipped fall run were salvaged at CVP; loss of 60 fish. There were no late fall or spring run salvaged or lost. There were 28 non-clipped winter run salvaged and 19 lost.

SWP: 154 non-clipped fall run were lost (small: 30–40mm), 4 ad-clipped late-fall run were salvaged on 1/19 and 4 on 1/22; total lost were 34 ad-clipped fish; 1 non-clipped salvaged on 1/20 for 17 non-clipped fish lost. There were a total of 199 losses for the week. Winter-run loss was 35 on 1/18, 87 on 1/20, and 26 on 1/21; it dropped off to 17 on 1/22 and back up to 34 on 1/23. The total YTD cumulative loss of winter run is 835 for the year beginning on October 1, 2010; the 2% incidental take level is 6,040.

Older juvenile Chinook loss and loss density (1/17–1/23/11)

Daily loss at SWP peaked on 1/20 at 104.82 fish and decreased after that. Daily loss at CVP peaked on 1/21 at 5.20 fish. Combined CVP/SWP daily loss was 107.42 on 1/20; combined loss density peaked at 5.25 fish/TAF on 1/20. On 1/23, the daily loss at SWP was 34.22fish; at CVP it was 5.20 fish and loss density was 1.81fish/TAF. Since 1/20, the numbers have gone down. The counts comprise winter, fall, and late-fall runs as older juveniles.

The first winter-run JPE-based OMR stage trigger in Action IV.2.3 of the NMFS BiOp, which manages Old and Middle River flow reversal volume, was exceeded on 1/19 with data reported on 1/20. The preliminary loss density was 4.37 fish/TAF, which put the daily older juvenile Chinook salmon density over the first trigger (3.32 fish/TAF) on Friday. An emergency WOMT meeting on Friday afternoon confirmed these numbers, and WOMT agreed to implement OMR at no more negative than -3,500 cfs. SWP exports were reduced beginning on Sunday afternoon (1/23/11). The loss density numbers were slightly higher than originally estimated by DWR. On 1/20, the actual loss was 5.25 fish/TAF after verification from DFG. One fish was left out of the original calculation. After 1/20, the loss density decreased below the first trigger (3.32 fish/TAF).

Steelhead and other salvage 1/19–1/23/11

CVP: There were 12 ad-clipped steelhead salvaged at CVP (4 each day). There were no non-clipped steelhead salvaged.

SWP: 28 ad-clipped steelhead were salvaged of which 12 were on 1/21, and 16 were on 1/23; there were 6 wild steelhead salvaged, of which 4 were on 1/19, and 2 were on 1/21. The total

combined cumulative non-clipped steelhead salvaged to date is 14 fish; the incidental take limit is 3,000 non-clipped steelhead. There were no green or white sturgeon reported lost at the pumps to date.

Spring-run Surrogate loss:

The first surrogate release (12/21/10): The confirmed loss of late-fall hatchery fish from this release was 78.67 (0.103% of release). This is still less than the 0.5% trigger in the NMFS opinion (RPA action 4.2.3). There were no recoveries of the second (1/14/11) spring-run surrogate release yet. The estimated predicted loss of the 12/21/10 release is 83.98 (0.110%), which is still less than the 0.5% trigger. There are 14 unread tags. The DOSS group expects an update from FWS later today on coded wire tag (CWT) recoveries.

A meeting with state and federal staff from the fish facilities will be scheduled soon to discuss how to improve real-time monitoring (such as the CWT data). The average time to receive CWT recovery data is about a 12 days. Is it possible to have someone from the Stockton FWS office at the fish facilities during high-salvage times to do real-time CWT readings? There are biologists at the fish facilities who can read the tags. CWT's are imprinted with numbers now instead of the old binary code; this should make them easier to read.

Winter run: Livingston Stone National Fish Hatchery is releasing 123,000 winter-run Chinook on 2/2/11. They will be released into the Sacramento River near Redding and will be the last group of hatchery fish to be monitored at the fish facilities.

Action item: DOSS still needs to follow up with Mokelumne Hatchery to get details of their fall-run Chinook releases.

Smelt working group (SWG):

Delta conditions: Water temperature is increasing, 9.8°C is the 3-station average. The Sacramento River is flowing at 24,000 cfs; the San Joaquin is at 10,000 cfs and is expected to drop to 8,000 cfs, but will be back up by the end of the week because of more flood-management releases. X2 is approximately 63 km (about 70 km a week ago) and is moving west. The E/I is 27%; the QWEST net Delta outflow index is 26,249 cfs. Overall turbidity is decreasing. No delta smelt were collected in the larva survey on 1/23/11; however, 177 smelt were collected (1/10) throughout the Delta, 155 were collected from the Sacramento River–Cache Slough, 17 from Suisun Bay, and 5 from the central and south Delta. There were 106 pre-spawning smelt collected; the remaining could not be determined.

Salvage: 4 delta smelt at the CVP on 1/15 and 4 on 1/17 for a total of 8. None at the SWP. Action 1 criteria in the FWS smelt biological opinion were not met. No recommendations were made from the group this past week. Flows appear to be high enough to keep delta smelt away from export facilities. The SWG recognized the fact that the OMR limit was reduced to -3,500 cfs for salmon, which will add protection for delta and longfin smelt.

Transition language

DOSS agreed that the OMR action to reduce flows after the first trigger for salmon loss specified in the BiOp was met on Sunday, 1/23/11. Five days from the action will be Thursday, 1/27. If

losses on Tuesday, Wednesday, and Thursday are below the trigger, OMR flows can return to no more negative than -5,000 cfs. If combine loss keeps going down, from a project standpoint, Thursday will be the last day of the 3 consecutive days that are being tracked. The trigger was actually met on 1/20; however, it has been more than 3 days since that time. Is it not an issue to ramp flows back up on Friday 1/28? It takes about 3 days to actually change operations. It takes about 5 days for fish to get out of the range of the pumps at the facilities. The loss numbers over the last 3 consecutive days is proof positive that fish are not near the pumps. On 1/25, it was 5 days since the data reported an exceedance of the trigger. By the time the 5 consecutive days at OMR flows of -3,500 cfs, and 3 consecutive days of less than 3.32 fish/TAF is met, that will be 8 days from when the trigger was met, but not 8 days of action. DOSS expects that if the salvage trigger is not hit again during the last 3 of the 5 consecutive days at no more negative than -3,500 cfs, OMR flows will return to no more negative than -5,000 cfs. On Friday, exports can increase as long as density for the last 3 days is lower than the trigger. If the 5-day period ends on Thursday, there would still be a lag time on data until Friday. DOSS will advise an action by end of that day. The intent of the NMFS BiOp is to measure losses/salvage and have low salvage over 3 "consecutive" days which will achieve a minimum of 5 days with -3,500 cfs; we will have fulfilled that requirement.

The intent is that the 5-day reduction in flows would give the fish a cushion to get out of the zone where they were more vulnerable to entrainment. The 5 days would allow them to move far enough downstream from exports to be safe. The last 3 days would indicate that there were considerably less fish – out of the zone of influence – after the 5th day, OMR flows can ramp back up again to no more negative than -5,000 cfs. This is not intended to be a permanent, long-term reduction. There is an operational hang-up to get to the -3,500 cfs OMR average. The SWP would have to risk ordering electricity and then having to cancel the order. OMR flows can be ramped up to no more negative than -5,000 cfs by Friday, if the loss in each of the 3 previous consecutive days is less than the trigger. DOSS will see data on Friday morning from Thursday operations; therefore, if OMR flows are scheduled to go back up to no more negative than -5000 cfs, but the fish density trigger is tripped, there would be only 12 hours at higher flows.

DWR: we want to make sure that the agencies are comfortable with our estimates: using a constant for daily loss data x 4.33 at the state facility, and 2/3 at the federal facility. Is DOSS comfortable with making these preliminary daily loss estimates? (see also BiOp for language p. 649). If the trigger is tripped on Thursday, but not reported until Friday, do we have enough time to lower the OMR flows? Maybe.

Does DOSS need to provide a recommendation to WOMT for the transition out of the 5-day action? This was to be worked out beforehand by a special technical team (sub-group of WOMT), but there has been no agreement on the transition language. DOSS agreed that they needed to advise the projects when to transition out of the action.

DOSS anticipates that the daily Chinook loss at the pumps will have a low period and then another peak in March based on historical data. When fish turn around to emigrate, we expect to see more loss at the salvage pumps. With such a low trigger, it doesn't take more than 5-6 fish observed at the SWP to trigger an action. DOSS concluded that the number of late fall-run contributing to the older juvenile loss should decrease; and the fall run are too small to count; so there are only winter-run making up the older juvenile loss density. Suggest not limiting to 3.32.

Do you want to have another DOSS or WOMT call this week? Who will do daily loss expansion for the rest of this week? DWR agreed to do this. DWR will send out Thursday's data by Friday morning.

Real-time data meeting w/DWR: We do not know a date yet for this meeting? (discussed above). Can we meet before or after the Tuesday DOSS call? We'll leave it up to fish facilities who they want to send. FWS regulatory people should be there. The points to discuss are:

- Identify the communication tree
- Agree to what is an acceptable turnaround time
- Discuss real-time coded wire tag readings and explore options better than we have
- Identify opportunity that we can do next year
- Have reports on Fridays

This group should discuss how to optimize reporting time lags and the technology involved. Do we want a few small meetings, or one big meeting? Bruce wanted to keep it small at first with NMFS and DWR staff getting together. DWR (Chu) will sort out what is there. Llaban and Mejia are responsible for compliance on this team. DWR should have some ideas this week, or Monday next week. Chu will handle the internal DWR group; Oppenheim will handle NMFS group.

Action item: Cynthia LeDoux-Bloom, DWR, will email her supervisor regarding meeting to get approval.

Operations

Sacramento River: Keswick releases decreasing, will be 4,000 cfs by 1/29/11.

Feather R: releasing 1,750 cfs

Sacramento R at Freeport: 24,000 cfs coming into Delta

San Joaquin R at Vernalis: Flows were 9,300 cfs and dropping steadily. We may still have a rebound; could get up to 10,000 cfs by the end of this week.

American River: releasing 2,500 cfs

Goodwin: 200 cfs

San Luis Reservoir: State storage at 883 TAF yesterday (1/24); 887 TAF today.

OMR flows: Daily running at -3,500 cfs; on 1/23, flows were -2,600 cfs, on 1/24, flows were -4,300 cfs. The 5-day average is close to -4,500 cfs; the 14-day average was -4,600 cfs. DWR changed the allotment at Clifton Court to -4,500 cfs today to get to the -3,500 cfs mark. The projects are using the new index formula (per science panel review) to project OMR -3,500 cfs by Wednesday.

Weather forecast: No rain in sight for this week. DWR is closely monitoring Port Chicago water quality for the end of the month and projecting out to 21 days.

DOSS advice: The DOSS advice to the WOMT and NMFS is for the CVP/SWP to maintain no more negative than -3500 cfs OMR flow through Thursday (the 5th consecutive day of the OMR action), and then transition back to an OMR no more negative than -5,000 cfs on Friday, unless a fish trigger is exceeded Tuesday, Wednesday, or Thursday this week. This will meet the OMR flow and fish density requirements in Action IV.2.3 of the NMFS Opinion and provide enough time for older juvenile salmonids to find their way out of the interior Delta.

Next meeting: Conference call: 2/1/11 from 9:00 to 11:00 a.m.